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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,907	11/18/2003	David Keating	15604-5	5656

7590 04/04/2005
GLEN E. BOOKS, ESQ.
LOWENSTEIN SANDLER PC
65 LIVINGSTON AVENUE
ROSELAND, NJ 07068

EXAMINER

BUI, HUNG S

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/715,907	KEATING ET AL.	
	Examiner	Art Unit	
	Hung S. Bui	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. [US 5,871,362] in view of Yohn et al. [US 5,482,474].

Regarding claims 1 and 4, Campbell et al. disclose an arrangement to facilitate vertical mounting of a subassembly on a system circuit board (figure 7) comprising:

- a subassembly (70) circuit board having a pair of major surfaces, a first edge to be mounted adjacent circuit board to the system circuit board and an opposing second edge (figure 7);

- a first base header (20) to be mounted on the system board comprising and elongated header and a plurality of mounting lugs (64) attached to the header in co-planar configuration;

- a second base header (20) to be mounted on the system bard comprising and elongated header and a plurality of conductors (50, figure 3) attached to the header in co-planar configuration; and

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- wherein the first and second base headers are adapted to mechanically couple to the vertically mounted subassembly circuit board adjacent the first edge (34, column 3, lines 24-45).

Campbell et al. disclose everything claimed except the conductors being pins.

Yohn et al. disclose a connection means (figure 1) for connecting circuit boards (22) having a plurality of connection pins (8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the connection pin design of Yohn et al. for the conductors of Campbell et al., for the purpose of enabling soldering to the system circuit board.

Regarding claim 2, Campbell et al. disclose the circuit board having a plurality of opening and the base header each including one or more projecting portions (34) in registration with the opening in the circuit board (column 3, lines 24-55).

Regarding claim 3, Campbell et al. disclose the circuit board including a plurality of openings (column 3, lines 24-45), at least one base header including a plurality of projecting portions in registration with opening in the circuit board and the other base header including a plurality of sockets (61) in registration with the projecting portions.

Regarding claims 6 and 11, Campbell et al. disclose everything claimed except the lugs being attached to the header by molding.

Yohn et al. disclose connecting lug (25) molded with the connector.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the lugs with the header of Campbell et al., as suggested by Yohn et al., for the purpose of securing and aligning the header on the system board.

Allowable Subject Matter

3. Claims 7-10 are allowed.
4. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is an examiner's statement of reasons for allowance: The cited references, Campbell et al. in view of Yohn et al. fail to disclose or render obvious in combination of the subassembly circuit board mounted in horizontal on a system circuit board, wherein the subassembly circuit board has a first opposing arm comprising a plurality of mounting lugs attached to the arm in co-planar configuration, each lug supports a lower surface of an open central region of a frame. In the opposing first side of the subassembly has a second opposing arm comprising a plurality of connector pins attached to the arm in co-planar configuration, each pin supports the lower surface of the frame. There is no suggestion to modify the references to include these limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

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preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

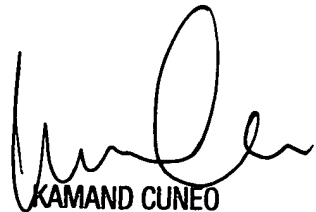
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/31/05
HB


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800